

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/22/09 has been entered.

Drawings

2. The drawings are objected to because Fig. 1 seems to be a top view of the invention and it is understood that all cells 2 are equal, but it is unclear as to why the shapes of the cells change and why the anchor point for each cell is moved when moving up the page. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3, 5-8, 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Amended claim 1 recites "the retaining means urge the lengths of the cells into a bent shape". There is no support for this limitation in the current disclosure.

Claims 2, 3, 5-8, 21, and 22 are rejected for depending on a rejected claim.

4. Claims 1-3, 5-8, 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in

the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Amended claim 1 recites "the retaining means urge the lengths of the cells into a bent shape". The current disclosure does not enable how the cells are urged into a bent shape through the retaining means.

Claims 2, 3, 5-8, 21, and 22 are rejected for depending on a rejected claim.

5. Claims 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 recites that the "loop straps and fasteners are offset at different distances from the centre linear axis of the cell"; however, the current disclosure only describes the fasteners being offset at different distances from the centre linear axis and not the loop straps.

Claim 7 is rejected for depending on a rejected claim.

6. Claims 16, 18, 19, and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Amended claim 16 recites "wherein the loops and the fasteners urge the

lengths of the cells into curved shapes". The current disclosure does not enable how the cells are urged into a curved shape through the loops and fasteners.

Claims 18, 19, and 26 are rejected for depending on a rejected claim.

7. Claims 27-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 27 recites "wherein the cells: (1) curve along their lengths". The current disclosure only discloses "linear cells" throughout the specification. The specification does support the cell curving but only when the cell is tensioned. The claims are not directed to a method of using a pressure pad. Claim 30 recites "the pad base is aligned coplanarly with the plane of the curves of the cells". There is no support of this limitation in the current disclosure.

Claims 28, 29, and 31-33 are rejected for depending on a rejected claim.

8. Claim 34 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 34 claims "different cells being bent to different degrees between the middles and ends of their lengths, with the bent cells

being oriented along a common plane parallel to the pad base"; however, there is not support in the current disclosure these limitations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3 and 5-7, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Cook et al. (US Patent No. 6,349,439).

Regarding claim 1, the Cook et al. reference discloses a pressure pad (e.g. Fig. 1) comprising at least two sets of alternately inflatable cells (e.g. 1 and 2), the cells having lengths extending linearly transversely along the pad (e.g. Fig. 1) and held in place on a pad base (Figs. 5A-5C) by retaining means (e.g. 4 and 20), characterized in that the retaining means urge the lengths of the cells into a bent shape (e.g. Figs. 1 and 5B, at least part of the length is bent) across the pad, the bend being within a plan parallel to the pad (Figs. 1 and 5B).

Regarding claim 2, the Cook et al. reference discloses the retaining means being releasable (Col. 3, Lines 41-48).

Regarding claim 3, the Cook et al. reference discloses the retaining means securing the opposite ends of each cell at a predetermined distance from the centre linear axis of the cell, and securing a central region of the length of each cell to center

the region about the centre linear axis (Fig. 1), such that the length of each cell is bent (Figs. 5A-5C).

Regarding claims 5, the Cook et al. reference discloses the retaining means comprising loop straps (e.g. 20) fixed to the pad base retaining the central region of the length of each cell and fasteners (e.g. Col. 3, Lines 41-48) releasably retaining each end of the cell to the pad base.

Regarding claim 6, the Cook et al. reference discloses the retaining means being offset at different distances from the centre linear axis of the cell (Fig. 1), such that the length of each cell is bent (Figs. 5A-5C).

Regarding claim 7, the Cook et al. reference discloses the retaining means secures the central region of the lengths of the cells along the centre linear axis of the cell (e.g. Fig. 1 and Figs. 5A-5C).

10. Claims 27-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Chapman et al. (GB Patent No. 2,319,721 A).

Regarding claim 27, the Chapman et al. reference discloses a pressure pad (Fig. 1) including:

- a. a pad base (e.g. including 13',13",13'",14',14",14""",15,16);
- b. at least two sets of alternately inflatable elongated cells (e.g. 1,2) atop the pad base (Fig. 4), the cells having lengths extending across the pad base (Fig. 1), wherein the cells:

- (1) curve along their lengths (Fig. 1), and

- (2) are arrayed in interfitting relationship (Fig. 1) wherein each cell:
 - (a) receives an adjacent cell within its curve (Fig. 1), and/or
 - (b) is received within the curve of an adjacent cell (Fig. 1).

Regarding claim 28, the Chapman et al. reference discloses

- a. the cells being restrained to the pad base in the curved shape (Figs. 1 and 4), and
- b. the cells assuming a different shape when no longer restrained to the pad base (e.g. the cells 1,2 do not have to be inflated when not connected to the pad base).

Regarding claim 29, the Chapman et al. reference discloses the curves of the cells being aligned along a common plane (Fig. 1).

Regarding claim 30, the Chapman et al. reference discloses the pad base being aligned coplanarly with the plane of the curves of the cells (Fig. 4).

Regarding claim 31, the Chapman et al. reference discloses

- a. each cell having a central portion spaced from the ends of its length (Fig.1), and
- b. the central portion having a central axis offset from a linear axis extending between the ends (Fig. 1).

Regarding claim 32, the Chapman et al. reference discloses

- a. each cell having a central portion spaced form the ends of its length (Fig. 1);
- b. the central portion being restrained to the pad base (Fig. 4); and

c. the central portion being offset from an axis extending between ends of its length (Fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-3, 5-7, 16, 18, 19, and 21-26, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. in view of Chapman et al.

Regarding claim 1, the Cook et al. reference discloses a pressure pad (e.g. Fig. 1) comprising at least two sets of alternately inflatable cells (e.g. 1 and 2), the cells having lengths extending linearly transversely along the pad (e.g. Fig. 1) and held in place on a pad base (Figs. 5A-5C) by retaining means (e.g. 4 and 20).

However, the Cook et al. reference fails to explicitly disclose the retaining means urging the lengths of the cells into a bent shape across the pad, the bend being within a plane parallel to the pad.

The Chapman et al. reference, an inflatable pad assembly, discloses providing bends in each cell (Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide bends in the cells of the Cook et al. reference in view of the teachings of the Chapman et al. reference in order to provide a greater length of each

cell in contact with the body with improved comfort since more of the patient is supported at any one time (Chapman et al., Page 2, Lines 29-31).

Regarding claim 2, the Cook et al. reference, as modified in claim 1, discloses the retaining means being releasable (Cook et al., Col. 3, Lines 41-48).

Regarding claim 3, the Cook et al. reference, as modified in claim 1, discloses the retaining means securing the opposite ends of each cell at a predetermined distance from the centre linear axis of the cell, and securing a central region of the length of each cell to center the region about the centre linear axis (Cook et al., Fig. 1), such that the length of each cell is bent (Cook et al., Figs. 5A-5C).

Regarding claims 5, the Cook et al. reference, as modified in claim 3, discloses the retaining means comprising loop straps (Cook et al., e.g. 20) fixed to the pad base retaining the central region of the length of each cell and fasteners (Cook et al., e.g. Col. 3, Lines 41-48) releasably retaining each end of the cell to the pad base.

Regarding claim 6, the Cook et al. reference, as modified in claim 5, discloses the retaining means being offset at different distances from the centre linear axis of the cell (Cook et al., Fig. 1), such that the length of each cell is bent (Cook et al., Figs. 5A-5C).

Regarding claim 7, the Cook et al. reference, as modified in claim 6, discloses the retaining means secures the central region of the lengths of the cells along the centre linear axis of the cell (Cook et al., e.g. Fig. 1 and Figs. 5A-5C).

Regarding claim 16, the Cook et al. reference discloses a pressure pad (Fig. 1) including:

- a. a pad base (Figs. 5A-5C);
- b. at least two sets of alternately inflatable cells (1,2) atop the pad base (Figs. 5A-5C), the cells having lengths extending between opposing cell ends across the pad base (Figs. 1,2,6);
- c. loops (e.g. 20) extending about the cells and restraining the cells to the pad base (Figs. 5A-5C), the loops being spaced from the cell ends (Figs.1,2,6); and
- d. fasteners at the cell ends (23), the fasteners being affixed to the pad base (Figs. 5A-5C), whereby the cells are held to the pad base (Figs. 5A-5C).

However, the Cook et al. reference fails to explicitly disclose the loops and the fasteners urging the lengths of the cells into curved shapes between the loops and the fasteners, with cells being received within the curves of adjacent cells.

The Chapman et al. reference, an inflatable pad assembly, discloses providing bends in each cell (Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide bends in the cells of the Cook et al. reference in view of the teachings of the Chapman et al. reference in order to provide a greater length of each cell in contact with the body with improved comfort since more of the patient is supported at any one time (Chapman et al., Page 2, Lines 29-31).

Regarding claim 18, the Cook et al. reference, as modified in claim 16, discloses the loops extending about one of the cells having central axes which are offset from a linear axis extending between the fasteners of the cell (Chapman et al., Fig. 1).

Regarding claim 19, the Cook et al. reference, as modified in claim 16, discloses the loops extending about one of the cells having central axes which are offset from a linear axis extending between the fasteners of the cell, the offset extending in a direction oriented at least substantially perpendicularly to the linear axis extending between the fasteners of the cell (Chapman et al., Fig. 1).

Regarding claim 21, the Cook et al. reference, as modified in claim 1, discloses the cells being adjacently arrayed such that the bent cells are interfit, with the bend of each cell receiving, and/or being received within, the bend of an adjacent cell (Chapman et al., Fig. 1).

Regarding claim 22, the Cook et al. reference, as modified in claim 3, discloses the bends of the cells receiving adjacent cells therein (Chapman et al., Fig. 1).

Regarding claim 23, the Cook et al. reference discloses a pressure pad (e.g. Fig. 1) including:

- a. a pad base (Figs. 5A-5C);
- b. at least two sets of alternately inflatable cells (e.g. 1 and 2) atop the pad base (Figs. 5A-5C), the cells having lengths extending across the pad base (Figs. 5A-5C), wherein the lengths of the cells are restrained (Figs. 5A-5C):
 - (1) at or near the middles of their lengths (Figs. 1,2,6), and
 - (2) at or near the ends of their lengths (Figs. 1,2,5A-6).

However, the Cook et al. reference fails to explicitly disclose bends in the lengths of the cells.

The Chapman et al. reference, an inflatable pad assembly, disclose providing bends in each cell (Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide bends in the cells of the Cook et al. reference in view of the teachings of the Chapman et al. reference in order to provide a greater length of each cell in contact with the body with improved comfort since more of the patient is supported at any one time (Chapman et al., Page 2, Lines 29-31).

Regarding claim 24, the Cook et al. reference, as modified in claim 23, discloses

- a. the sets of cells having their lengths adjacently arrayed (Chapman et al., Fig. 1), and
- b. at least some of the cells having adjacent cells situated within their bends (Chapman et al., Fig. 1)).

Regarding claim 25, the Cook et al. reference, as modified in claim 23, discloses the bends of the cells resting in a common plane (Chapman et al., Fig. 1).

Regarding claim 26, the Cook et al. reference, as modified in claim 26, discloses the bends of the cells resting in a common plane (Chapman et al., Fig. 1).

12. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. in view of Cook et al.

Regarding claim 33, the Chapman et al. reference discloses the invention substantially as claimed in claim 32.

However, the Chapman et al. reference fails to explicitly disclose the central portion being restrained to the pad base by a loop extending from the pad base about the central portion.

The Cook et al. reference, an inflatable pad assembly, discloses the use of loops (e.g. 5 and 20).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide loops to the Chapman et al. reference in view of the teachings of the Cook et al. reference in order to ensure that the cells are restrained.

Response to Arguments

13. Applicant's arguments filed 9/22/09 have been fully considered but they are not persuasive.

With regards to the applicant's arguments of the rejections of the claim limitation "urge the lengths of the cells into a bent shape", the arguments are not persuasive since the combination of the retaining means and the pad maintain/hold the cells in a bent shape.

14. Applicant's arguments with respect to claims 1-3, 5-8, 16, 18-19, and 21-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GILBERT Y. LEE whose telephone number is (571)272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer H Gay/
Supervisory Patent Examiner, Art
Unit 3676

/G. Y. L./
Examiner, Art Unit 3676